

PATENT  
Docket No. 59427US002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant(s): Scott A. BURTON et al. ) Group Art Unit: 1611  
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Serial No.: 10/728,446                  ) Examiner: Isis A. D. Ghali  
Confirmation No.: 9352                  )  
Filed: 5 December 2003                 )  
For: SILVER COATINGS AND METHODS OF MANUFACTURE

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

Appellants hereby request a review of the final rejection dated August 18, 2009 in the above-identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The pending claims are claims 1-4, 6-35, 37-39, and 45-50, all of which stand rejected.

This request is based upon a clear factual deficiency in the rejections. Review is requested for the following reasons: the Examiner clearly erred in technical interpretation of GB 769,799 (primary reference in each obviousness rejection). Appellants request consideration of the Examiner's factual deficiencies discussed hereinbelow with the arguments for patentability of the present claims at pages 10-14 of the Amendment and Response dated April 8, 2009.

Appellants' claims each recite: combining the sparingly soluble silver-containing compound (e.g., silver oxide) with the ammonium-containing compound (e.g., ammonium carbonate) to form an aqueous solution prior to coating on a substrate, and subsequently, coating the solution formed by combining the silver-containing compound and the ammonium-containing compound on a substrate.

GB 769,799 teaches that in order to make a photostable silver fabric, the silver salt and the photostabilizing metal salt need to be co-precipitated by addition of a second solution. That is, the method of GB 769,799 uses multiple solutions: (1) a first solution containing a water-soluble silver salt and a water-soluble salt of a metal other than silver (the first salt); and (2) a second solution that

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includes two water soluble salts (the second and third salts) and ammonia or other water-soluble basic nitrogen compound. GB 769,799 contains no teaching or suggestion of forming an aqueous solution (including a sparingly soluble silver-containing compound and an ammonium containing compound) prior to coating on a substrate, and subsequently coating the solution on a substrate.

**The Examiner clearly erred in the technical interpretation of GB 769,799 in several ways in the 35 U.S.C. §103 Rejections.**

The Examiner rejected all claims under 35 U.S.C. §103 as being unpatentable over several combinations of documents with GB 769,799. Appellants respectfully submit that the Examiner erred in at least four ways:

(1) The Examiner is not correct that GB 769,799 teaches that “both the silver salt and ammonium compound are in single solution prior to application to the article” (at page 5 of the Office Action dated August 18, 2009) and is not correct that “GB ‘799 teaches ammonia added to the sparingly water soluble salt solution for solubilizing the solution” (at page 6).

A careful reading of GB 769,799, particularly starting at page 2, line 77, reveals that, for example, the second salt in the second solution of GB 769,799 includes an anion of a sparingly water-soluble silver salt (e.g., chloride in the form of sodium chloride), but not silver cations.<sup>1</sup> Thus, there is no silver-containing compound in the second solution with the ammonia.<sup>2</sup> The silver-containing compound and ammonia (or other basic nitrogen compound) are in two separate solutions that are applied sequentially (i.e., “a succession of properly chosen solutions” as disclosed at page 2, lines 21-22 of GB 769,799) to a substrate with mechanical removal of excess solution (e.g., “squeezing, wringing, or wiping” at page 2, lines 89-90 and 106) between applications of the two separate solutions. There is no teaching or suggestion of combining these compounds prior to coating them on a substrate.

Furthermore, the silver salt that is deposited out of solution in GB 769,799 is then converted to another silver salt while in contact with the substrate. That is, the final silver salt in the dried coating of GB 769,799 is formed on the substrate by depositing the second solution. Although a

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<sup>1</sup> Other than in failed Treatment O in Example 2, which includes AgCl.

<sup>2</sup> Other than in failed Treatment O of Example 2, which includes AgCl.

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sparingly soluble silver salt results, it is transformed into this from a soluble silver salt while on the substrate upon deposition of the second solution containing an anion of a sparingly water-soluble silver salt.

In contrast, Appellants' method involves depositing the sparingly soluble silver salt out of the coating solution that includes the ammonium-containing compound, which was formed prior to the coating step. For example, claim 1 recites in part, providing a sparingly soluble silver-containing compound, providing an ammonium-containing compound, combining the sparingly soluble silver-containing compound with the ammonium-containing compound to form an aqueous solution prior to coating on a substrate, and subsequently, coating the solution formed by combining the silver-containing compound and the ammonium-containing compound on a substrate, and drying the coating wherein the dried coating includes the sparingly soluble silver-containing compound deposited from the coating solution. This is neither taught nor suggested by GB 769,799.

Thus, there is no teaching or suggestion of Appellants' process for depositing a sparingly soluble silver salt on a substrate. There is no teaching or suggestion that an ammonium-containing compound can be used in one solution with a sparingly soluble silver salt and used to subsequently deposit such salt on a substrate. There is no teaching or suggestion that such process could result in a dried coating that is stable against darkening, for example, when exposed to at least one of visible light, ultraviolet light, electron beam, and gamma ray sterilization.

(2) The Examiner is not correct (at page 4 of the Office Action dated August 18, 2009) that "GB '799 teaches . . . dipping or wetting the substrate surface with solution comprising aqueous solution of silver salt including silver nitrate, and ammonia compound to solubilize the silver salt, followed by drying the wet substrate." For example, as discussed herein, GB '799 does not teach a sparingly soluble silver salt and an ammonia compound in a single aqueous solution prior to coating a substrate, but rather teaches separately wetting a substrate surface with first and second solutions.

(3) The Examiner is not correct that GB 769,799 discloses "using an aqueous solution comprising sparingly water soluble silver salt and ammonia coated on the article and then drying the article" (at page 7 of the Office Action dated August 18, 2009), "coat[ing] a medical article using an aqueous solution comprising sparingly soluble silver salt and ammonia" (twice at page 8), "sparingly water soluble silver salts and ammonium compounds for coating a substrate" (at page 12), "coating

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of the composition containing silver salt and ammonium compound on a substrate" (at pages 13 and 14), and "coat[ing] a medical article using an aqueous solution comprising sparingly soluble silver oxide and ammonia" (at page 14). GB 769,799 does not disclose the effective use of a solution that includes a sparingly soluble silver salt and an ammonia compound.<sup>3</sup> GB 769,799 does not disclose or suggest combining a sparingly soluble silver-containing compound with an ammonium-containing compound to form an aqueous solution prior to coating on a substrate, and subsequently, coating the solution formed by combining the silver-containing compound and the ammonium-containing compound on a substrate, and drying the coating wherein the dried coating includes the sparingly soluble silver-containing compound deposited from the coating solution.

(4) The Examiner is not correct (at page 7 of the Office Action dated August 18, 2009) that GB 769,799 discloses "an aqueous solution comprising sparingly water soluble silver nitrate and ammonia." This is not accurate for at least two reasons. One, silver nitrate is characterized at page 2, line 80 of GB 769,799 as a water-soluble salt, not a sparingly soluble salt. Two, the silver nitrate is in the first solution (GB 769,799, page 2, lines 79-80) and the ammonia is in the second solution (GB 769,799, page 2, lines 93-104).

These are clear errors. Thus, these rejections are traversed. For the foregoing reasons, Appellants respectfully request review and reversal of the final rejection, dated August 18, 2009, in the above-identified application, and that a Panel Decision allowance of the existing claims.

In light of these clear errors, Appellants submit that there is no motivation to combine the teachings of WO 02/43743 with GB 769,799. With respect to WO 02/43743, it is true that this teaches that ammonium salts (such as ammonium carbonate) facilitate silver photostabilization. This is because the ammonium compound remains on or in the material. In contrast, the ammonia or

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<sup>3</sup> The only possible example in GB 769,799 that can be characterized in this manner is Example 2, Treatment O, which discloses a formulation where AgCl is combined with aqueous ammonia to form a solution. However, two solutions are used in Treatment O, and the "[c]otton cloth treated according to Treatment 'O' was not stable against discoloration by light" (page 7, lines 45-47). Thus, this is a teaching away from Appellants' invention.

**Pre-Appeal Brief Request For Review**

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amine, which serves as a solubilizer in GB 769,799 is removed by vaporization (see, e.g., page 2, lines 28-29). Thus, it is not present on the dried article. So, it is not clear to Appellants that the ammonia or amine could be assisting in photostabilization of the silver on the dried article.

Photostabilization of the silver salt in GB 769,799 is being accomplished through the use of a sparingly water-soluble compound of a metal other than silver (see, e.g., page 1, lines 85-89). Therefore, there is no motivation to combine the teachings of WO 02/43743 with GB 769,799.

**Double Patenting**

Claims 1-4, 6-35, 37-39, and 45-50 have been provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-51 of copending Application No. 10,917,002 and over claims 21-30 of copending Application No. 10/917,102. Upon indication of otherwise allowable subject matter, Appellants will provide an appropriate response.

Respectfully submitted

By

Mueting, Raasch & Gebhardt, P.A.

P.O. Box 581336

Minneapolis, MN 55458-1336

Phone: (612) 305-1220

Facsimile: (612) 305-1228

October 26, 2009

Date

By:

Ann M. Mueting

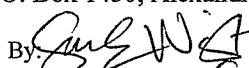
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Direct Dial (612) 305-1217



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By:

Name: Sara E. Wigant